

## ABSTRACT

**[0046]** Congestion within a traffic stream of interest in a communication network is characterized as self-induced congestion or cross-induced congestion by analyzing a correlation result of a time series of throughput data of the traffic stream of interest and making the characterization based on power spectrum features found in the correlation result. The correlation result may be obtained through a Fourier analysis, a wavelet analysis or any mathematical process based on locating periodicities in the time series. In some cases, the characterization is made at a node in the communication network that is downstream from the congestion, while in other cases, the characterization is made at a node in the communication network that is upstream of the congestion.